

ABSTRACT

A time division duplex digital radio frame structure with time and frequency diversity and method for use thereof is presented. Each packet of data is transmitted twice in successive frequency hops, such that the redundant transmission differs in both time and frequency from the primary transmission. A communications system employing the frame structure may be configured to dynamically shift between fully diverse, asynchronous and non-diverse modes of operation. The mode of operation may be selected based upon one or more operating parameters, such as battery power or detected interference. When error correction is implemented and a primary transmission is received without error, system devices may de-power circuitry to reduce power consumption.